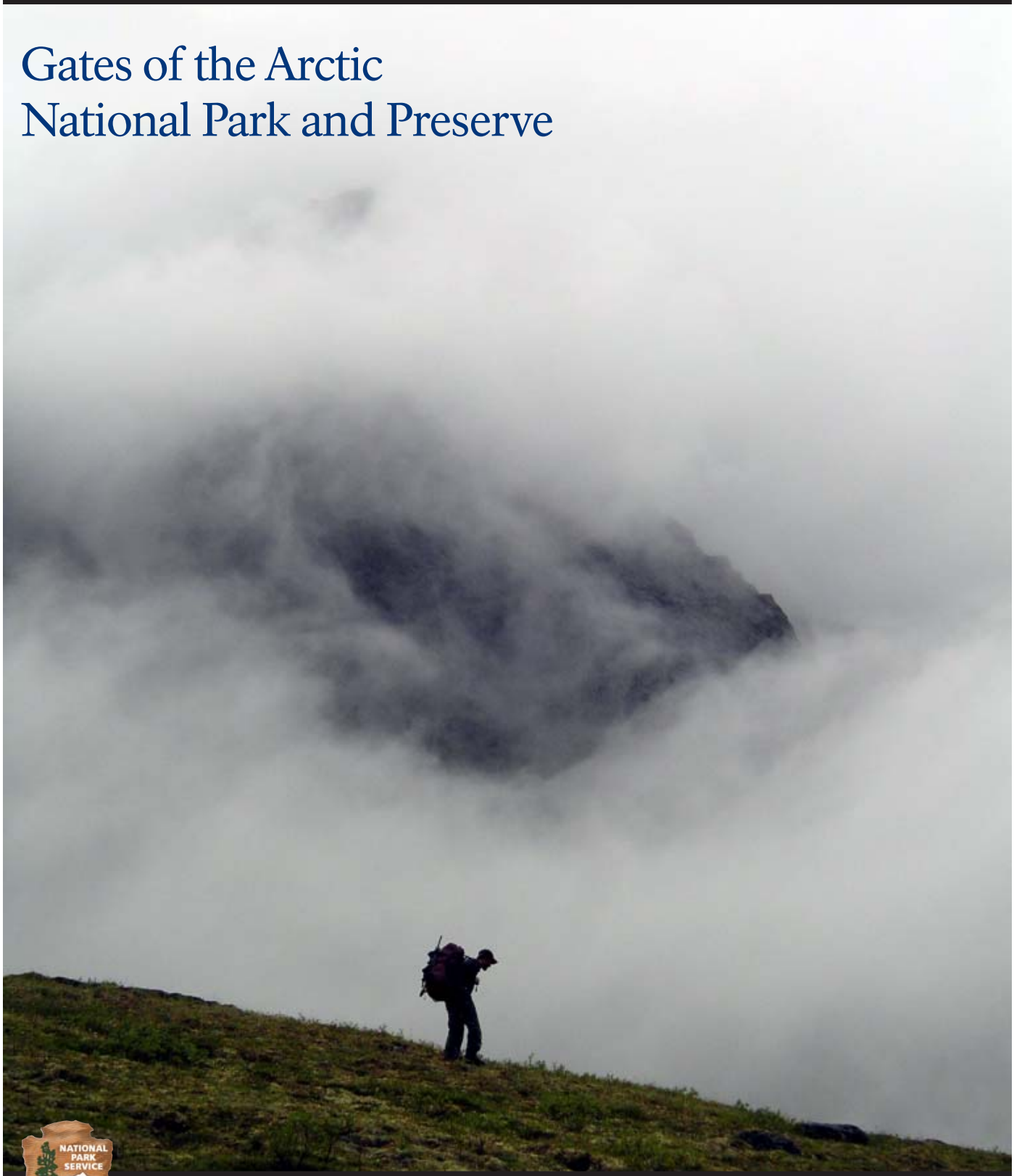
**Annual Report 2009**

# Gates of the Arctic National Park and Preserve



National Park Service
Department of the Interior

*...There are some people*
*who can live without wild*
*things about them and the*
*earth beneath their feet,*
*and some who cannot.*
*To those of us who, in a*
*city, are always aware of*
*the abused and abased*
*earth below the pavement,*
*walking on the grass,*
*watching the flight of birds,*
*or finding the first spring*
*dandelion*
*are the rights as old and*
*unalienable as the rights of*
*life, liberty and the pursuit*
*of happiness.*
*We belong to no cult.*
*We are not Nature Lovers.*
*We don't love nature any*
*more than we love*
*breathing. Nature is*
*simply something*
*indispensable,*
*like air and light and wa-*
*ter, that we accept as neces-*
*sary to living,*
*and the nearer we can get*
*to it the happier we are.*

*— Louise Dickinson Rich*
(author of *We Took to the Woods*)

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Yellow-billed loons are a coastal Species of Concern that occassionally can be found on large lakes in Gates of the Arctic National Park and Preserve.


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by National Park Service, unless noted otherwise


Cover photo: NPS Ranger Christian Breen patrols Gates of the Arctic National Park near Ananktuvuk Pass.


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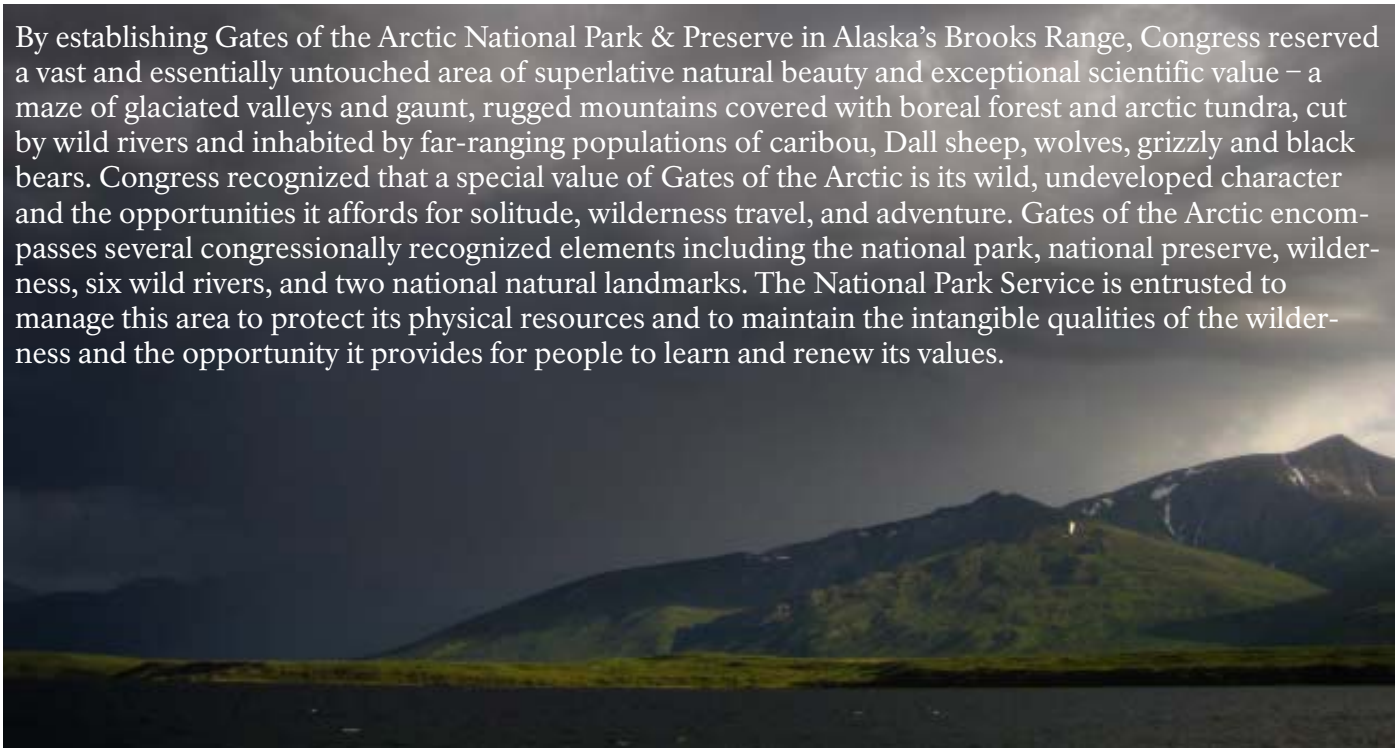
*Printed on recycled paper.*

# *Purpose and Significance*



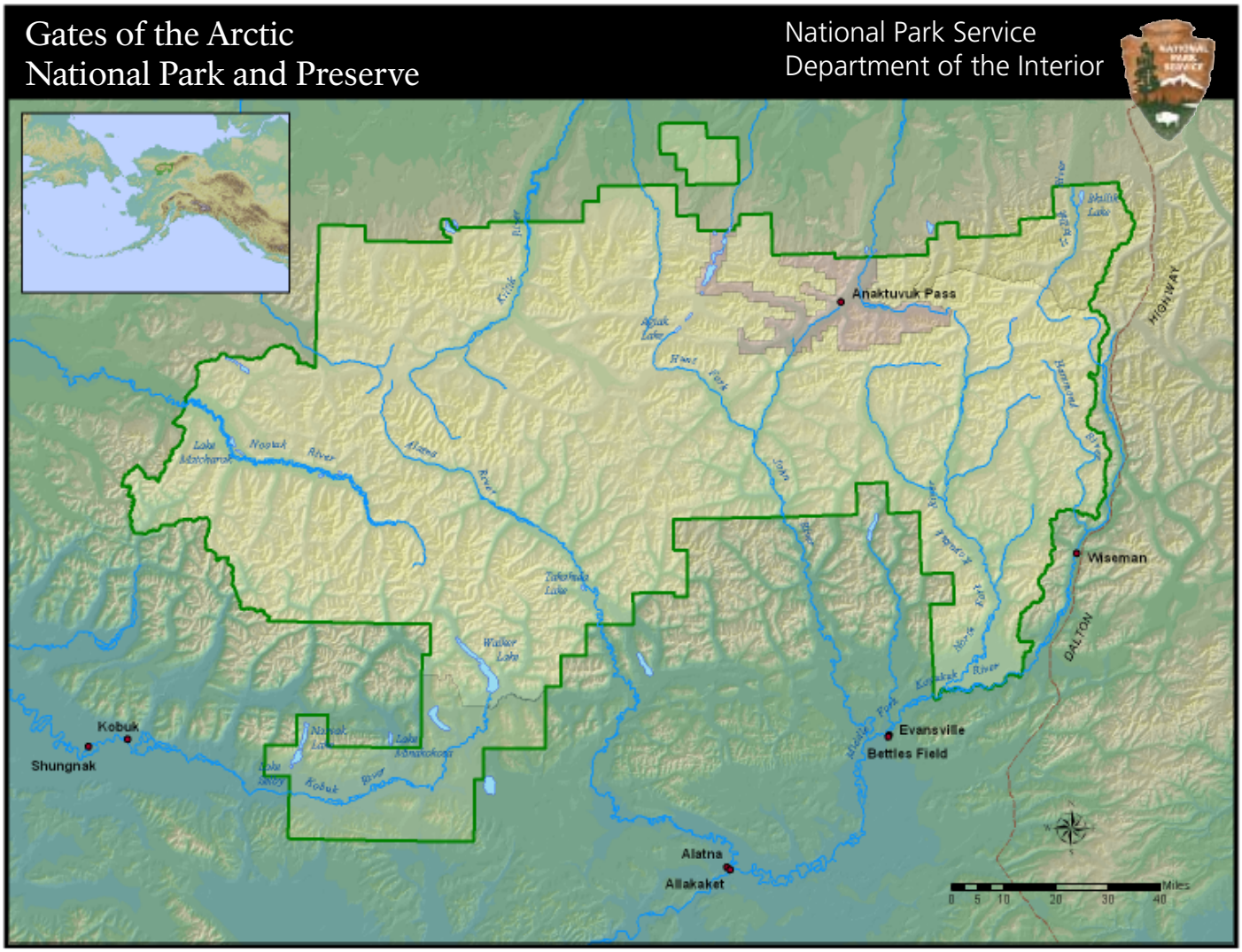
By establishing Gates of the Arctic National Park & Preserve in Alaska's Brooks Range, Congress reserved a vast and essentially untouched area of superlative natural beauty and exceptional scientific value – a maze of glaciated valleys and gaunt, rugged mountains covered with boreal forest and arctic tundra, cut by wild rivers and inhabited by far-ranging populations of caribou, Dall sheep, wolves, grizzly and black bears. Congress recognized that a special value of Gates of the Arctic is its wild, undeveloped character and the opportunities it affords for solitude, wilderness travel, and adventure. Gates of the Arctic encompasses several congressionally recognized elements including the national park, national preserve, wilderness, six wild rivers, and two national natural landmarks. The National Park Service is entrusted to manage this area to protect its physical resources and to maintain the intangible qualities of the wilderness and the opportunity it provides for people to learn and renew its values.

## Purpose of Gates of the Arctic National Park and Preserve

- Preserve the wild and undeveloped character and natural environmental integrity—including natural processes, habitat, and biodiversity—of the central Brooks Range;
- Provide opportunities for appropriate wilderness recreational activities and solitude; and
- Allow rural residents engaged in a subsistence way of life to continue to do so.

## Significance of Gates of the Arctic National Park and Preserve

- Gates of the Arctic is the central component of a 40-million-acre contiguous, undeveloped protected area, one of the largest protected areas in an increasingly developed world.
- Due to its vastness and undeveloped character, Gates of the Arctic provides outstanding recreational wilderness opportunities.
- Gates of the Arctic protects the core of the traditional homelands of the Nunamiut peoples.
- The area inspired Bob Marshall, who coined the term "Gates of the Arctic," and was one of the earliest proponents of arctic preservation and one of the founders of the American wilderness system.
- Gates of the Arctic exemplifies an intact, high latitude arctic ecosystem with its corresponding natural processes, flora, and fauna.




Gates of the Arctic National Park and Preserve lies north of the Arctic Circle in the central Brooks Range of Alaska. Visitors to the Park typically access the area via the Dalton Highway and hike in, or by air. Commercial carriers serve Bettles and Anaktuvuk Pass, where the Park maintains field offices. Air charter operators based in Bettles fly visitors into the Park using float planes that land on many of the larger lakes and rivers.

Visitors to Gates of the Arctic are encouraged to check in at one of the Park's field offices in Bettles or Anaktuvuk Pass, or at the Visitors Center in Coldfoot prior to their trip. Park Rangers and VIPs offer orientations which brief visitors in safety issues and Leave No Trace camping techniques.

Visitors are encouraged to practice "Leave No Trace" techniques while travelling in the Park so everyone may enjoy the pleasures of pristine wilderness and personal discovery.

# *Message from the Superintendent*

During the winter of 2009, the park hosted a presentation about climate change in northern latitudes by Matt Nolan, an Associate Professor at the University of Alaska, Fairbanks. During his talk, Professor Nolan placed an image on the screen which sticks with me to this day. The image was a depiction of Earth from above the geographic north pole; it demonstrated how unique the landforms of the Central Brooks Range are at that latitude from a global perspective.

It was from that presentation and the ensuing discussion that I came to appreciate in new and fresh ways how truly unique–and important–Gates of the Arctic National Park and Preserve is, nationally and from a world perspective. While the term "unique" is often over-used, it is certainly an appropriate adjective for this 8.4 million acre unit of the National Park Service. For traditional peoples and local subsistence users, advocates of wilderness, seekers of solitude, and investigators of naturally functioning, high latitude mountain environments, this has long been known. As even more people begin to value the vast, wild, undeveloped character and environmental integrity of 'The Gates,' they too will come to understand and know.

This 2009 Annual Report for Gates of the Arctic National Park and Preserve is intended to provide the reader with an overview of our accomplishments over the past year. We want to increase understanding and enhance the appreciation the American people have for this place. As Superintendent, I am proud of what the staff–the caretakers of this, the second largest national park in the country–have achieved. In the pages that follow, you will learn more about recent natural and cultural resource investigations and protection efforts; how we are serving and providing assistance to the region's residents and visitors who come to the park both physically and 'virtually;' and how we utilize the staff and fiscal resources to ensure accountability and organizational effectiveness.

To that end, one of the most significant developments in the past year was the initiation of a new general management plan (GMP) for Gates of the Arctic. When completed in 2012, the GMP will provide updated direction for managing the park over the next 15 to 20 years. The National Parks and Recreation Act of 1978 (P.L. 95-625) requires the preparation and timely revision of general management plans for each unit of the national park system. Gates of the Arctic's last GMP was completed in 1986. Since then conditions within and outside the park have changed: the Dalton Highway running along the park's eastern boundary has opened to the public, the land exchange at Anaktuvuk Pass (including deauthorization of wilderness acreage) occurred in 1996, recreational use patterns have changed, and the climate–as mentioned–is changing, all of which are affecting both park resources and visitor experiences. In 2009 we completed a park foundation statement which identifies fundamental resources and values of Gates of the Arctic. I encourage you to visit the park's website at http://www.nps.gov/gaar/ to make your opinions known and to stay informed of developments for this important planning process.

Thank you for your interest in Gates of the Arctic National Park and Preserve. We could not do what we do without a talented staff and the support and encouragement of our many friends and partners. Protecting and sharing this unique place, the acknowledged premier Wilderness park of the National Park Service, is a privilege. I hope you enjoy reviewing the accomplishments highlighted in this report.

Greg Dudgeon, Superintendent

# *Preserve Resources*

*Natural and cultural resources and associated values at Gates of the Arctic National Park and Preserve are protected, restored and maintained in good condition and managed within their broader ecosystem and cultural context.*

**Goal Ia8: By September 30, 2009, 975 (66% of 1,482) of Gates of the Arctic National Park and Preserve's archeological sites are in good condition.**
***GOAL EXCEEDED*** `+

## Kobuk River Land Use 2009 Archaeological Inventory

By Chris Ciancibelli

The 2009 field season marked the beginning of a multi-year project focusing on the Kobuk River region of Gates of the Arctic NP&P. The aim for the first year of work on this project was to inventory and revisit as many archaeological sites along the river corridor as possible, as well as to identify potential areas and themes for future study.

In relation to the remainder of the park, little attention has been paid to the resources in this region. Only brief site inventories along the upper portions of the river and the major lakes have been performed. Previous surveys within the study unit in the 1970's and 80's identified 261 sites.

The 2009 field season focal points included Walker Lake, Nutuvukti Lake and the entire length of the Kobuk River within the Preserve boundary. The selected study unit encompasses 1.2 million acres of NPS land within the Kobuk River watershed. The six person crew covered and estimated total of 8,100 acres. Fifty-two new sites were identified and an additional 32 site condition assessments were performed, combining for 83 total site visits during the 6 weeks of fieldwork.

An obsidian projectile point discovered at a site on the Kobuk River in 2009.

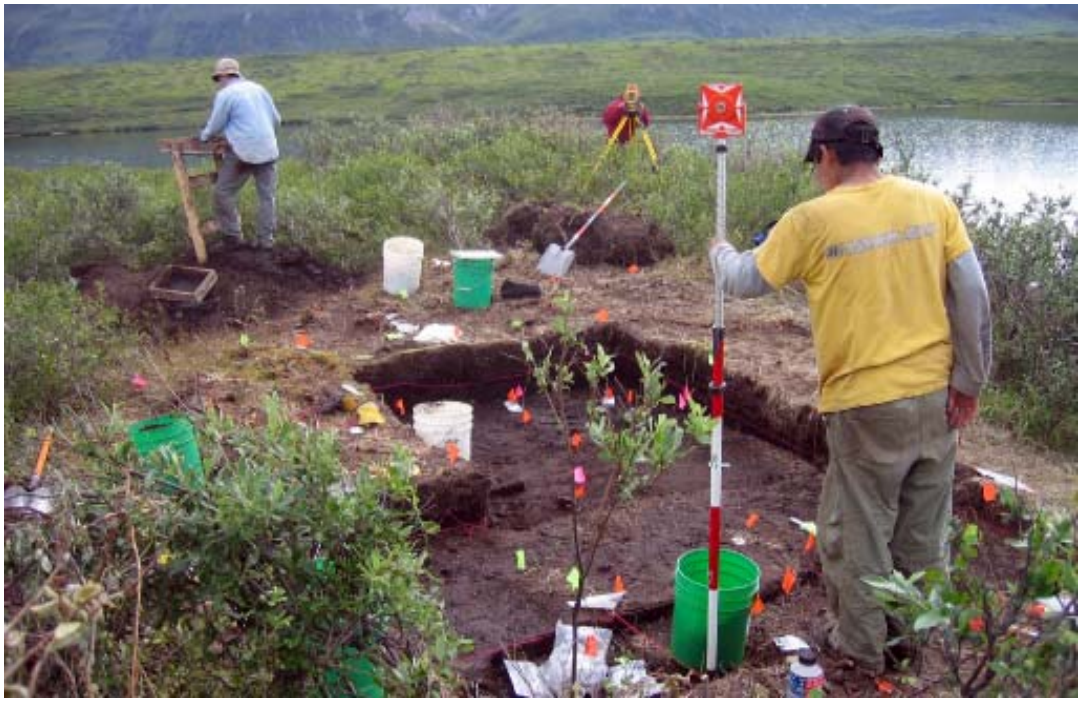
National Park Service archaeologists Phoebe Gilbert and Chris Ciancibelli conduct a small test excavation to characterize the archaeological deposits at a site along the Kobuk River.

Newly identified sites consist primarily of lithic scatters, although some faunal material was also recovered. Forest fires have exposed, yet negatively impacted, several of these sites. The few noted human-caused resource impacts were concentrated around Walker Lake.

Highlights from this year's field season include such finds as a prehistoric tool cache near Nutuvukti Lake. This site is located on a glacial moraine adjacent to a kettle lake and consists of an assortment of bifacial stone tools of varying size and stages of completeness. Future plans are to return to further document the site and hopefully obtain more information regarding its age and function, as well as to further survey the surrounding area.

Other finds include artifacts indicating potential association with the Northern Archaic and Paleo-arctic traditions, the presence of obsidian from 4 different sources (including the nearby Batza Tena and 3 of yet unknown locations), and the presence of subsurface remains, which could help in determining the age of sites.

This flaked chert biface, likely used as a knife, was one of several similar artifacts found within a tool cache near Nutuvukti Lake during the 2009 Kobuk River survey. Archaeologists plan to return here for further investigations into the potential age and function of the site.



Excavation continued into a second field season at the Matcharak Lake archaeological site, where researchers slowly worked their way down through the permafrost, encountering 4,000-year-old cultural remains. At right, Tim Williams (foreground) and Scott Shirar record the location of an artifact while Dael Devenport screens sediments searching for artifacts.

## Matcharak Lake Archaeological Investigation: The Caribou Hunters of 4000 Years Ago

By Andrew Tremayne

Archaeological investigations at Matcharak Lake continued with 3weeks of excavation and limited survey in late July and early August. We added to our collections another small sample of rare, 4000-year-old Denbigh Flint Complex organic bone and antler tools, and many more animal bones. Numerous visitors and volunteers took part in the project, and documentary podcasts were produced on three days.

Ongoing bone analysis shows that people camped here multiple times, possibly over many generations. Animals were hunted and killed during the spring and fall caribou migrations. The bones reveal that at least 25 caribou and 3 Dall sheep were killed, butchered and brought to the site. Other animals were also exploited at Matcharak Lake, including porcupine, marmot, arctic ground squirrel, snowshoe hare, ermine, birds and fish. The presence of burbot, a bottom feeding fresh water cod, suggests the fishing technology of Denbigh people must have included some form of hook and line for jigging. One intriguing find was of four canid bone fragments. We suspect these bones to be wolf, but the possibility that these are bones of domesticated dog cannot be ruled out. While investigation into this problem is ongoing, we may have the earliest evidence of domesticated dog in the arctic.

While it appears that numerous animals were exploited at Matcharak Lake 4000 years ago, it is clear that these hunters relied predominantly on caribou for their sustenance. Ninety-four percent of the food acquired and consumed here came from caribou, 4% from sheep, and 2% came from small mammals, birds and

*Bone analysis shows that people camped here multiple times, possibly over many generations.*

An eroding bluff face at the Matcharak Lake site. NPS excavations have focused on rescuing information at this important site before it is destroyed by ongoing erosion.

fish. This suggests that people came to this area specifically to exploit migrating caribou herds.

We estimate that only 10% of this site has been excavated. If our sample is representative of the whole site, we can estimate as many as 150 caribou could have been butchered and processed here, enough food for 25 people to live here for a year. Hypotheses about hunter-gatherers in the Brooks Range suggest these people were likely very mobile, moving camp at least seasonally. If so, this group must have returned here multiple times, or they lived in a much larger group than historic people of the region did. The obvious question then, is where did these people go after they abandoned this camp?

Additional surveys around Matcharak Lake turned up 3 new archaeology sites, one of which produced a radiocarbon date about 5,100 years old. This site holds potential for preserved animal bones in a similar context to the site described above, and could be greatly informative to future studies focused on subsistence change in the Upper Noatak.

Fragment of a projectile point (top), and decorated antler tool, both from the 4000-year-old Matcharak Lake site.

## Museum Collections Highlights

By Jeff Rasic

Gates of the Arctic accessioned and cataloged an important archaeological collection excavated from Matcharak Lake in 2008 and 2009. This Denbigh Flint Complex site, about 4000 years old, is notable for its excellent level of organic artifact preservation. The collection contains some 26,000 pieces of animal bone, flaked stone artifacts, and some of the few known antler and bone tools from this time period in Alaska. This year, 2,506 catalog records and 2,6175 objects were added to the collections.

## A Public Historian's Paradise

By Chris Allan

The kind of history work that National Park Service historians do is different from the kind academics do, and there is a name for it: *public history*. Public history includes many different sub-disciplines like historic building restoration, Section 106 compliance, oral history, museum work, archiving, film and video production, and interpretation of historic sites. Public historians try to reach a broad audience by producing histories with local relevance like biographies of interesting individuals, institutional histories, land-use studies, historic building surveys, and National Register nominations. State and federal agencies frequently employ public historians to document agency operations.

To be sure, there is no better place for a public historian than the National Park Service. In the past year I have had the opportunity to write about the history of the Hickel Highway, to discover what made Bob Marshall the principal visionary behind the creation of Gates of the Arctic, and to examine cabins and other physical evidence of gold mining in the Yukon River region. I contributed to a video interpretation project, helped rangers distinguish between garbage and historical treasure, and began the process of writing park administrative histories. I've also written material for park websites and conducted an oral history interviews. It doesn't get any more public history than that.


NPS Historian Chris Allan at the historic Bettles general store south of Gates of the Arctic National Park and Preserve on the banks of the Koyukuk River.

## Giving Back: Creating Digital Access to Local Knowledge

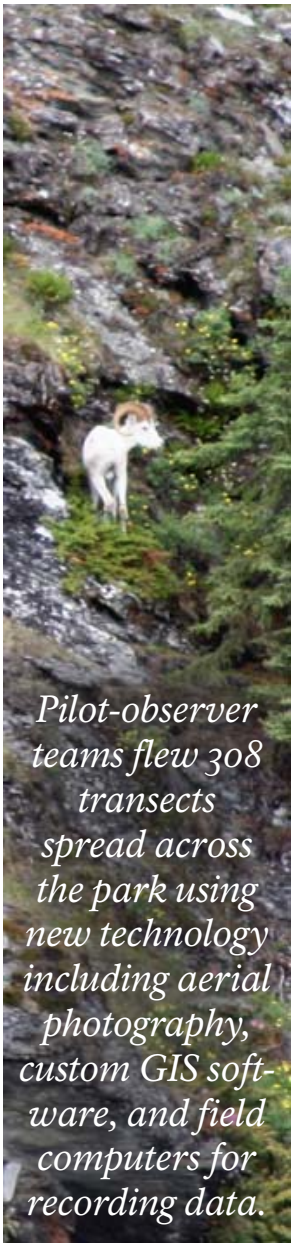
By David Krupa

Work continued on a web-based digital portal designed to make archival records, photographs, books, and manuscripts relating to resident-zone communities more accessible to these communities and the interested public. In a collaborative effort between University of Alaska Fairbanks and NPS, project staff traveled to Bettles/Evansville and Allakaket/Alatna in August to acquaint local residents with the program and gather local input on priorities for digitizing and further documentation of university and NPS collections. Village elders went to Fairbanks in November to survey library, museum, and NPS collections to help choose the most important materials for digital access.

The web-based Gates of the Arctic research portal, still under construction, can be visited at *http://jukebox.uaf.edu/gatesportal/index.html*.

*The National Park Service contributes to knowledge about natural and cultural resources and associated values; management decisions about resources and visitors are based on adequate scholarly and scientific information.*

**Goal Ia2B: By September 30, 2009, 3 populations (33% of 9) of Gates of the Arctic National Park and Preserve species of management concern are managed to desired condition.**
***GOAL ACHIEVED***



*Pilot-observer teams flew 308 transects spread across the park using new technology including aerial photography, custom GIS software, and field computers for recording data.*

## Developing an Alaska-wide Method for Monitoring Dall's Sheep Abundance and Distribution

By Kumi Rattenbury

Arctic Network is collaborating with Central Alaska Network to develop comprehensive methods for monitoring abundance and distribution of Dall's sheep in six of Alaska's largest parks and preserves: Gates of the Arctic National Park and Preserve, Noatak National Preserve, Kobuk Valley National Park, Denali National Park and Preserve, Wrangell-St. Elias National Park and Preserve and Lake Clark National Park and Preserve. These park units may contain as much as 36% of the world's population of Dall's sheep, but previous surveys have varied in technique and success, leaving data gaps for park managers.

In June and July 2009, we tested distance sampling methods in Gates of the Arctic. Pilot-observer teams flew 308 transects spread across the park using new technology including aerial photography of sheep groups, and custom GIS software and field computers for recording data. One hundred sixty-six groups, totaling 727 individual Dall's sheep, were observed on 73 transects. These data are currently being analyzed to determine a park-wide abundance estimate. Another survey is planned for summer 2010. If these surveys produce satisfactory results, the methods will be applied in other park units. This collaboration is aimed at producing abundance estimates with statistical precision and accuracy to detect critical changes in Dall's sheep numbers.

Dall's sheep rams peer at an airplane passing overhead. A new distance sampling method for surveying sheep was tested in Gates of Arctic.

## Review of the Species Status of the Angayukaksurak Charr

By Scott Ayers

A new species of fish of the genus *Salvelinus* was described in the early 1970's by Dr. James Morrow of the University of Alaska. The existence of this fish was brought to his attention, in part, by the residents of Anaktuvuk Pass, as they distinguished it as a separate species from the Dolly Varden and Arctic charr that also reside in the region. Although Dr. Morrows study, which relied on counts of anatomical features and body measurements, showed that this fish was distinct, it has never been widely accepted as a new species.

Collaboration between the National Park Service Arctic Network and the University of Alaska Fairbanks brought about this multi-year graduate project to further investigate the question of species status for the Angayukaksurak charr. We collected specimens of Angayukaksurak charr from multiple locations in Gates of the Arctic around the Anaktuvuk Pass region and Dolly Varden from sites within Noatak National Preserve for comparative purposes. We used anatomical features, body measurements, and genetic markers to determine if clear differences were evident between our samples.

Our results show that Angayukaksurak charr are not distinct from Dolly Varden. Although these fish appear to display a unique life history of residency - remaining in freshwater streams their entire lives - rather than anadromy, they are not a separate species based on the markers examined and should be considered a resident life history form of Dolly Varden.

Previously listed as the Angayukaksurak Charr (*Salvelinus anaktuvukensis*), this fish is now recognized as a resident form of the Dolly Varden (*Salvelinus malma*).

*Our results show that the Angayukaksurak charr is not distinct from Dolly Varden.*

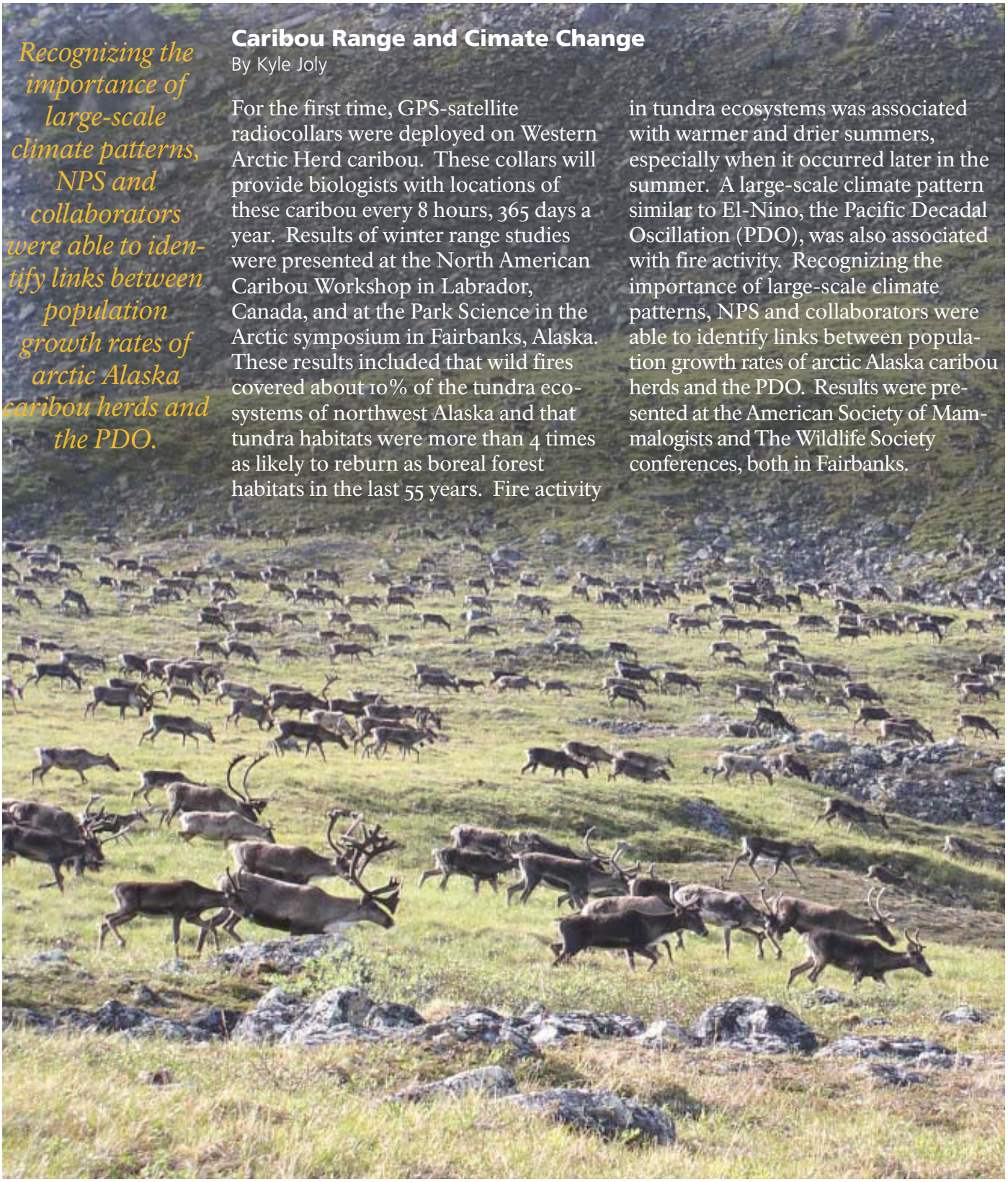
UAF graduate student Scott Ayers sets a minnow trap into a small open-water tributary of the Anaktuvuk River in early March, 2009.

## Caribou Range and Cimate Change

By Kyle Joly

*Recognizing the importance of large-scale climate patterns, NPS and collaborators were able to identify links between population growth rates of arctic Alaska caribou herds and the PDO.*

For the first time, GPS-satellite radiocollars were deployed on Western Arctic Herd caribou. These collars will provide biologists with locations of these caribou every 8 hours, 365 days a year. Results of winter range studies were presented at the North American Caribou Workshop in Labrador, Canada, and at the Park Science in the Arctic symposium in Fairbanks, Alaska. These results included that wild fires covered about 10% of the tundra ecosystems of northwest Alaska and that tundra habitats were more than 4 times as likely to reburn as boreal forest habitats in the last 55 years. Fire activity in tundra ecosystems was associated with warmer and drier summers, especially when it occurred later in the summer. A large-scale climate pattern similar to El-Nino, the Pacific Decadal Oscillation (PDO), was also associated with fire activity. Recognizing the importance of large-scale climate patterns, NPS and collaborators were able to identify links between population growth rates of arctic Alaska caribou herds and the PDO. Results were presented at the American Society of Mammalogists and The Wildlife Society conferences, both in Fairbanks.



## Climate and Snow Monitoring in the Arctic Parks

By Pamela Sousanes

The Arctic sea ice minimum extent for 2009 was greater than during the previous record-setting low years of 2007 and 2008, but still remained far below normal. The ice that did remain was thin leaving it vulnerable to melt in the next few years. The status of arctic sea ice affects temperature and precipitation patterns across the ARCN parks. The Pacific Decadal Oscillation, an index of sea surface temperatures in the north Pacific, remained in a negative phase for 23 consecutive months ending in August of 2009, the longest continuous run since the 1998-2000 period when 20 consecutive months of negative PDO values were recorded. The affects of a warmer ocean have strong correlations to interior Alaska temperatures, especially in winter, and reach as far north as the foothills of the Brooks Range. Instrumenting the areas in the ARCN parks that are severely under represented with climate index stations will help determine how these large scale oceanic and atmospheric circulation patterns are affecting climate patterns in ARCN park ecosystems.

The Seward Peninsula and Kotzebue area had record high snowfalls for March. Nome, on the southern Seward Peninsula had the snowiest March on record, which followed their snowiest February on record. This led to the second greatest snow depth ever recorded, 78 inches (198.1 cm) on the 12th of April. The Bettles station south of Gates of the Arctic reported a March snow depth that was 87% of normal. These are the few areas of the ARCN that report on snowfall. The addition of snow depth sensors and a SNOTEL site in Noatak will greatly enhance our knowledge of winter precipitation patterns that play a significant role in ARCN ecosystem dynamics.

**Climate is considered to be the most important** broad-scale factor influencing ecosystems. Because global climate models indicate that climate change and variability will be greatest at high latitudes, climate monitoring will be critical to understanding the changing conditions of park ecosystems.

Potential effects in the Arctic parks include a reduced snowpack, earlier ice break-up on lakes, warmer winters, and wetter summers. These changes may affect the distribution, abundance, growth, and productivity of plants and animals.

The remote automated climate stations proposed for Gates of the Arctic, like this one in Yukon-Charley Rivers National Preserve, record air temperature, relative humidity, wind speed and direction, soil temperature, snow depth and solar radiation. The datalogger and sensors mount on a 9' (3 m) tall tripod and are powered by a 50 watt solar panel and two deep cycle batteries. The data are sent via satellite transmitter every hour and are available in near real-time at http://wrcc.dri.edu/NPS.

## Snowshoe Hare Populations Show Local Variation

By Donna DiFolco

*This live-trap study will be used to derive hare density estimates that are more accurate than what track count or pellet count data can provide.*

The 13th annual track count indicated a marked increase in the number of hares along Wiseman Creek at the eastern edge of Gates of the Arctic in March 2009. Additional, albeit anecdotal evidence that the hare population is increasing, was the presence of lynx in the area, which have been virtually absent for the last several years while hare populations remained low. Pellet counts in June, however, indicated a slight decline in hare densities at Wiseman Creek. Pellet counts throughout the six study sites had mixed results, with non-mineral sites supporting hare populations that were either increasing or maintaining greater densities than mineral sites, which indicated slight declines in population densities from the previous year.

In August, NPS and UAF jointly initiated a mark-recapture study of hares at one mineral and one non-mineral site. This live-trap study will be used to derive hare density estimates that are more accurate than what track count or pellet count data can provide, as well as document population parameters such as body condition, recruitment, and survival.

UAF Principle Investigator Dr. Knut Kielland hauls live traps to the grid site for the snowshoe hare ecology project.

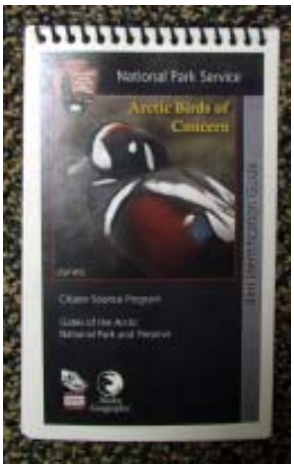
UAF graduate student Suzanne Worker releases a snowshoe hare. Hares are weighed, sexed and marked with ear tags.

## Firebird: Collocating and Correlating Fire, Avian and Mammalian Long-term Ecological Monitoring

By Jennifer S. Mitchell, Jennifer L. Allen, Melanie Flamme, and Nikolina Guldager

"Firebird" was established in 2009 as a collaborative project between the Arctic Network Inventory and Monitoring Program (ARCN), the NPS Alaska Regional Fire Program and Gates of the Arctic National Park and Preserve in an effort to collocate long-term ecological monitoring of fire and birds on a landscape level. The project was designed to combine and contemporaneously conduct field measures of: 1) breeding bird density estimation with 2) secondary fire effects and 3) herbivory by moose, hare, and caribou. In addition, new survey techniques for determining density estimates for bird species were also tested by replacing distance estimation with transect replication. The long-term application of Firebird protocols will allow for detection of trends in, and correlations between, parameters associated with fire, avian and mammalian ecology in Arctic parklands. Several of the many ecological parameters selected for Firebird monitoring (especially breeding bird density, secondary fire effects, and permafrost active layer depth as well as habitat use by herbivores) are considered important components of park ecosystems and good indicators of local and regional changes, particularly in response to shifts in climate. The intent of the Firebird project is to apply the same set of Firebird protocols in four river valleys within ARCN parks on a five year rotation schedule for decades to come.

Biological Technician Ben Sedinger gathers fire ecology data during a combined fire and bird monitoring effort along the Kobuk River in Gates of the Arctic.




**The Wilderness Stewardship** Division of NPS in Washington D.C. is considering ARCN landbird species of concern flipbooks for use in developing citizen science and wilderness outreach programs. The flipbooks were developed by Gates of the Arctic's Education Specialist Tracie Pendergrast for use in landbird outreach programs in communities within ARCN. They highlight 12 bird species of concern occurring in ARCN parklands, and educate students about ARCN programs occurring in their areas, bird identification, species of concern, and how bird research is conducted.

# *Provide for Public Enjoyment and Visitor Experience*

*Visitors safely enjoy and are satisfied with the availability, accessibility, diversity, and quality of park facilities, services, and appropriate recreational opportunities.*

**Goal IIa1A: By September 30, 2009, 96% of visitors to Gates of the Arctic National Park and Preserve are satisfied with appropriate park facilities, services, and recreational opportunities.**
***GOAL EXCEEDED***

Seasonal Law Enforcement Ranger Nina Valadez visits a solo backpacker camped near the Itkillik River along the Preserve/Park boundary in August, 2009.

## Protecting Gates of the Arctic's Wilderness Values

by Nina Valadez

Summer 2009 was a good year for making strong cases for resource protection. For the first time since 2001, two seasonal law enforcement (LE) rangers joined the seasonal backcountry rangers and ranger/pilot in protecting the park's resources.

With support of the general backcountry rangers, we were able to make cases against food storage violators, fishing violations, illegal outfitting and guiding operations, and illegally taken game within the park's boundary. These violations occurred throughout the park from the Noatak River, Walker Lake, and John River.

Maintaining our presence during the hunting season is critical to the protection of our wildlife resources. In addition to backcountry patrols in the Itkillik and Kobuk preserves, contacts with hunters at the Bettles Ranger Station were successful in educating hunters on regulations and preserve boundary issues.

In addition to patrols in Gates of the Arctic, we were also able to help our neighbors in Noatak Preserve where an investigation of illegal guiding and property abandonment is ongoing.

*...rangers were able to make cases against food storage violators, fishing violations, illegal outfitting and guiding operations, and illegally taken game within the park's boundary...*

Over 80 packages of freeze dried meals and trash abandoned at Cutler Creek were chewed on and scattered by wildlife. This case is currently under investigation by LE Rangers.

LE Ranger/Pilot Seth McMillan writes a citation for illegal guiding in Gates of the Arctic.

## Rangers Retrieve Collars

By Nick Thompson

Through intimate knowledge of the land, perseverance, and a passionate dedication to preserving Gates of Arctic's wilderness character, rangers proved successful at retrieving caribou radio collars from the park on foot. In the past, helicopters have been used to find and pick-up the data relaying collars. Ranger staff volunteered for the retrieval project in order to try and limit the use of helicopters in designated wilderness areas. The 8.5 million acres encompassing the wilderness park and preserve made finding the softball sized collars a fun challenge. Armed with a small hand-held remote tracking radio device several collars were located and brought back to Fairbanks biologists for redeployment.

Instead of using helicopters to locate dropped radio collars, park rangers set out on foot to find them. Dense fog and sleet didn't help in locating this collar. Ranger Christian Breen displays the hard won prize.

A private inholding at Walker Lake, including this boat house with boats, was relinquished to the Park by the Classen family.

## Classen Cabin Relinquished to Park

By Nick Thompson

In July, rangers conducted a multi-purpose patrol at Walker Lake. While monitoring 4th of July fishing activities, they conducted an assessment and evaluation of the Classen private property in-holdings within the park. This private in-holding was relinquished to NPS in accordance with Mr. Classen's will and the family's wishes. The cabin has running water, and a boat house/small repair shop, as well as two types of water craft. Mr. Classen's death, in conjunction with the passing of Lil Fickus, a true participant in the pioneer days for the John River area, marks the memory of a different era before the establishment of the Park.

## Preserving Wilderness at "Gates of the Arctic"

By Nick Thompson

As ease of access and affordability draw more visitors to Gates of the Arctic's namesake landmark—Boreal Mountain and Frigid Crags in the North Fork of the Koyukuk River valley—the area's popularity threatens the values that make it so special: its wilderness character.

The North Fork is one of the more affordable trips to experience in Gates of the Arctic. It involves one of shortest and least expensive flights into the park. It also is accessible by road for backpacking and canoeing on a tight budget. This easier access and greater affordability may be resulting in more visitors to the Park's namesake area.

Summer 2009 saw an increase in the number of flight-seeing tours in the North Fork drainage. Reports from visitors of flights causes concern for the wilderness experience that the park prides itself on. These are issues managers will need to address in the near future.

*Increasing numbers of visitors... are issues managers will need to address in the near future.*

A bush plane takes off near the "Gates of the Arctic" in the North Fork Koyukuk River valley. Increasing popularity of this area is causing managers concern as greater numbers of people and flights threaten the very wilderness values most visitors seek to experience here.

Trails worn into the tundra attest to the heavy use received at popular drop-off and take-out lake portages and backpacking areas.

*Park visitors and the general public understand and appreciate the preservation of parks and their resources for this and future generations.*

## Arctic Interagency Visitor Center Welcomes Dalton Travelers

By Heidi Schoppenhorst

*AIVC continued to be the main hub of travel, safety, backcountry, and environmental information along the Dalton*

The Arctic Interagency Visitor Center (AIVC) is located in Coldfoot, Alaska, roughly halfway between Fairbanks and Prudhoe Bay along the Dalton Highway. Situated within the Bureau of Land Management Dalton Highway Utility Corridor, adjacent to National Park Service managed Gates of the Arctic NP&P, and centered between US Fish & Wildlife managed Yukon Flats, Kanuti, and Arctic National Wildlife refuges, this facility is operated jointly by all three Department of Interior agencies. Also working in cooperation with the Center is the non-profit Alaska Geographic educational books and materials sales store. AIVC continued to be the main hub of travel, safety, backcountry, and environmental information along the Dalton for travelers in 2009. Open 10 a.m. to 10 p.m. from late May through early September, this modern facility attracts most Dalton travelers who reach Coldfoot.

*Visitors: How many?*

We hosted 8,631 visitors this year, an overall a decline of approximately 11% , or 1,026 people fewer than in 2008. Although the major tour companies were still operating (along with a few less regular tours), the decline was

The Arctic Interagency Visitor Center in Coldfoot, Alaska, hosted 8,631 visitors in 2009.

reflected mostly in guided visitors (down 27%). Independent travelers were down only 2%. Although we do not keep track of where visitors come from, we noted more Alaskans traveling the Dalton this year, and this may be the factor that kept our independent numbers up. Researchers and educational visitors (Toolik Lake researchers, Boy Scouts, etc.) were also down 2%.

*What were visitors doing?*

Many visitors to the AIVC were just exploring the Dalton to see the sights, some with the intention of only going as far as Coldfoot, others with the goal of reaching the Arctic Ocean. Although there were fewer bicyclists on the road this year, many motorcyclists traveled the highway, some with a life goal of reaching the Arctic Ocean by motorcycle. We saw more campers/travel trailers heading up the road this season, many Alaskans, and more family groups traveling. Conversations with hunters revealed that many were unaware of the off-road vehicle restriction in the corridor, and some were unaware there even was a corridor. Fishing, gold panning, photography, wildlife viewing and hiking were other activities inspiring folks to drive the Dalton. We also saw several groups of officials relating to preliminary planning for gas line development and highway improvement.

*Backcountry Visitors*

Many visitors hiking into the park from the Dalton used common access routes via Trembly Creek (Kuyuktuvuk), and Galbraith, but some were finding less commonly used routes as well. Also, more backcountry visitors staged from Coldfoot to fly into the park–Noatak being a popular destination. Coyote Air continues to be the primary air service used by backcountry travelers flying out of Coldfoot. Bear resistant food containers were available for all backcountry travelers to check out free of charge.

*Education & Outreach*

Besides answering thousands of questions ranging from "Where's Coldfoot?" to "How far are we from the north pole?" we also offered an array of interpretive brochures and trail guides. "Discovery Boxes" (tubs containing interpretive guides and tools for kids), as well as binoculars and field guides, were popular items for visitors to check out while traveling the Dalton. A new historic mining photo display was set up in the hallway portraying the early days of Coldfoot, Wiseman, and Nolan. New Alaskan coloring pages were designed for the kids' table.

Program attendance is primarily by guided visitors, and since tours were smaller this year, program numbers reflected that decline. Even so, 2,133 visitors viewed a total of 109 staff-led presentations and 3 special presentations. Visitors may also choose educational films from our library to watch on the "big screen" in the theater. This is a popular option for visitors, and 496 people viewed 138 films of their own choosing.

Interpretive evening programs and presentations offered at the Arctic Interagency Visitor Center throughout the summer covered a wide range of topics, including:

- Polar Bears
- Winter patrols
- Arctic Refuge
- Kanuti Refuge
- Owls
- Arctic Art
- Gates of the Arctic
- Mosquitoes
- Medicinal Arctic Plants
- Full Circle-An Arctic Year
- History of Haul Road Trucking

Special guests presented 3 programs in June;

- Arctic Refuge Wilderness
- King of Birds
- Boreal Owls

## Bettles Visitor Center Welcomes Locals and Travellers

By Zak Richter

A busy, exciting 2009 summer season began with an open house at the new visitor center. Community turn-out was fabulous and the BBQ was enjoyed by all. The visitor center, jointly operated by NPS and U. S. Fish & Wildlife Service (USFWS), has been well received by the community and enjoyed by many visitors. People are happy to see the commitment to the community shown by both agencies and several neighbors have commented on the integral role that NPS and USFWS have in the future success of the community.

The new interpretive area provides an excellent venue for backcountry/leave no trace orientations, and for more formal presentations. For many people, traveling to Gates of the Arctic is a pinnacle experience. The new visitor center has given us the space and resources necessary to provide an exceptional experience that may inspire visitors to join us in perpetuating the pristine ecosystems found within our park borders.

In August, Project Jukebox hosted a presentation on how NPS is collaborating with University of Alaska to preserve the oral history of the region, and what resources are available to the community. The event was attended by Evansville elders and many other community members. Also in August, NPS hosted a potluck to announce the start of the revision of Gates of the Arctic's General Management Plan. Much interest was expressed by community members, with people coming from as far as Allakaket to attend.

In addition to events and interpretive moments, the visitor center also provides visitors with opportunities to just relax and read, or watch the new Park film, *Gates of the Arctic: Alaska's Brooks Range,* in the theater. Educational groups like National Outdoor Leadership School and other guided groups stopped in, and rangers were able to make many visitor contacts both at the station and in the field. Rangers capitalized on these opportunities to educate visitors about the complex ecosystems and features within the Gates of the Arctic and Kanuti National Wildlife Refuge.

Gates of the Arctic Operations staff in front of the Visitor's Center in Bettles.

# *Ensure Organizational Effectiveness*

*The National Park Service uses current management practices, systems, and technologies to accomplish its mission.*

## Updating Gates of the Arctic's General Management Plan

By Jobe Chakuchin

Gates of the Arctic National Park & Preserve is embarking on an update of the 1986 General Management Plan (GMP) that will include a Comprehensive River Management Plan and a Wilderness Study Plan. Many changes have occurred that require an update to the 23 year old GMP, such as emerging issues with climate change, land status changes with the Anaktuvuk Pass land exchange in 1996, the opening of the Dalton Highway to public access, and technological changes such as satellite phones, personal locator beacons, use of global positioning systems, Alpaca Raft access, and many others. These evolutions in society require an equal evolution in how we manage Gates of the Arctic, and provide a roadmap for the next 20 years. The National Park Service hopes to capture these challenges facing our visitors and local rural residents, and look to the future in how we address these issues and concerns.

*Why update the GMP?*

1. A general management plan serves as a foundation and framework for the management and use of Gate of the Arctic National Park and Preserve.
2. The plan articulates the management vision for the park and the conditions of the natural and cultural resources and visitor experience at the end of a 20 year planning horizon.
3. The plan lays the groundwork for more detailed planning and the day-to-day decision-making that follows.
4. The general management plan considers the park as a part of larger ecological, cultural, and social and economic systems. This comprehensive approach includes coordination with the park's neighbors, including other land managers and neighboring communities, to ensure that the decisions made through this process are widely supported and sustainable over time.

***GMP Update Tentative Timeline***

March – May 2010:
Public Scoping begins for Gates of the Arctic Resident Zone Communities for Gates of the Arctic, Anaktuvuk Pass, Wiseman, Bettles, Evansville, Alatna, Allakaket, Shungnak, Fairbanks & Anchorage

January – March 2011:
Preliminary Alternative Development Public Scoping

While this is not the last chance for public scoping, we hope the public will engage in communicating their issues and concerns involving Gates of the Arctic.

Members of the GAAR GMP planning team discuss the possibilities of the new General Management Plan for Gates of the Arctic at Walker Lake.

## Admin Team Offers Full Service with a Smile

By Monica Cross

The Admin Team are not just paper pushers and IT geeks. Admin Assistant Christy Splechter helped with Arctic Network's aerial Dall's sheep survey. Above, she models her flight gear before taking off to count sheep.

(Former) Administrative Officer Robyn Burch picks up trash along NPS's 1-mile stretch of the Parks Highway in the Adopt-A-Highway program. In addition to this biannual project, the Admin Team also recycles paper, aluminum, plastic and unserviceable computer equipment, and participates in the North Star Borough Fuel Saver program.

Fiscal Year 2009 brought change and new learning opportunities. In June, Administrative Officer Robyn Burch accepted the position of Alaska Regional Human Resource Officer. This left us short staffed with two IT specialists, one budget analyst (who also acted as AO), and three admin assistants (two in Fairbanks, one in Eagle). We had new programs to learn, new directives, a new charge card contractor, and a new third party draft payment system. We had to learn quickly and then become teachers to help everyone else navigate these changes.

The Administrative Team supports all the GPRA goals for Gates of the Arctic National Park & Preserve, Yukon-Charley Rivers National Preserve, Fairbanks Alaska Public Lands Information Center, and inventory and monitoring programs for the Central Alaska and Arctic networks. We also support the Eastern Area Fire Management Program. Six organization codes with differing legislation are managed and supported by the Fairbanks Administrative Center. We are thankful for the cooperation and support provided by everyone, particularly Arctic Network's and Fire Program's admin assistants, who helped with duties beyond their individual programs.

Our Fairbanks based admin assistants initiated 230 personnel action requests, paid almost 300 vendors, input 112 purchase orders, and processed over 350 travel vouchers in addition to answering phones, filing, processing mail, greeting visitors, and helping internal and external customers with a smile. We could not have done any of this without our support staff in Eagle and Bettles, who are crucial to successful field operations.

Due to the diligence of our IT specialists, we have had no successful virus attacks on our computer network for 7 years. This year saw major improvements in IT. Among them were: 1) installing HughesNet satellite dish at Coal Creek Camp—the first ever computer connectivity for this remote location; 2) providing DSL service and phone/fax lines for the hangar office used by Alaska NPS pilots; 3) re-connecting FAPLIC subnet after moving to the new Morris Thompson Cultural and Visitors Center (MTCVC); 4) setting up new server system with 10 terabytes of storage space and moving all active date files onto this server configured with 6 network ports, resulting in faster user access with improved reliability; and 5) installing AKR-purchased network accelerators at all network subnets, improving connection speeds for everyone.

Cooperation with others is one of our major strengths. We have shared facilities with BLM in Eagle and FWS in Bettles; we are partners with BLM and FWS at the Arctic Interagency Visitor Center in Coldfoot; and we are a partner in the MTCVC.

## Volunteers Serve the National Park Service

By DaleLynn Gardner

Thirty-six VIPs spent 8,419 hours inventorying archaeological sites, documenting local history, patrolling the backcountry, interacting with visitors, and performing routine maintenance for Gates of the Arctic this year. Highlights include:

*Archeological Survey and Site Monitoring*
Six archeology students joined the field staff as VIPs, doing inventory and monitoring of known cultural sites along the Kobuk and Noatak Rivers, and at Walker Lake. This involved a lot of painstaking, fine detail oriented work while the VIPs battled mosquitoes, mud, rain, and even snow. VIPs spent weeks at a time living in tents, bathing in rivers and keeping a wary eye out for the occasional curious bear.

*Local Native History Video Project*
Film makers, some of whom were VIPs, worked on filming local residents who spoke about their family's ties to the land and their history in the park. These interviews will be used in on-line education and outreach materials.

*Backcountry Patrols*
VIPs spent almost two thousand hours with backcountry rangers, patrolling the park throughout the summer and during hunting season.

*Total VIPs: 36*
*Total hours: 8,419*

Volunteers Shelli Swanson, Sarah Swanson and Austin Kingsbury take a break from counting pellets for Gates of the Arctic's snowshoe hare study.

# *Financial Summary*

## Operating Budget Base Allocation (ONPS) Expenditure Highlights

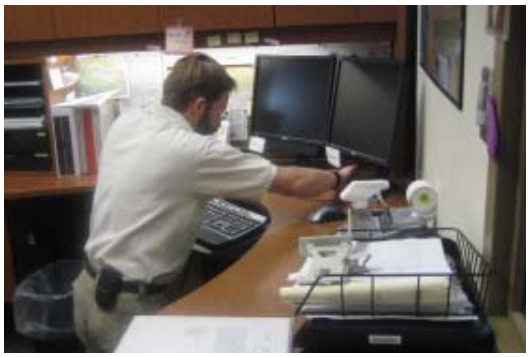
*This is what we do: wildlife and ecological studies, archaeological projects, communitiy outreach and information sharing, visitor safety and education, resource protection, data management and personnel support*

**Research & Studies: $670,252**
GAAR Resources division and Arctic Network collaborated with partners in several projects, including assessing caribou winter range and changes in fire regime, sheep and moose surveys, and developing protocols for caribou and yellow-billed loons. Expanded efforts to gather multiple information during field activities was used by fire and bird disciplines on the Kobuk. Archaeological work focused on the Kobuk River and Matcharak Lake, while the underwater archaeology project at Agiak Lake did not yield anticipated findings. Education repatriation efforts were expanded to villages. An interactive geodatabase for observing large-scale lake drying and thermokarst events in ARCN parks was developed.

**Facility Operation & Maint: $533,500**
This year, we completed over 90% of outstanding deferred maintenance. We finished interior housing rehabilitations in Bettles, including new paint, trim, countertops, and floor finish. New door hardware and locksets were installed in Anaktuvuk Pass Ranger Station. At Marion Creek, we completed rehabilitation of the power distribution system and also cleaned up grounds around the housing area. We also installed electrical service battery backups for the IT systems in Bettles and Eagle.

**Resource Protection & Visitor Services: $785,061**
Backcountry and hunting patrols assured visitor safety and resource protection.
Our GAAR Subsistence program continued its great work connecting with resident zone villages and work through issues and concerns.

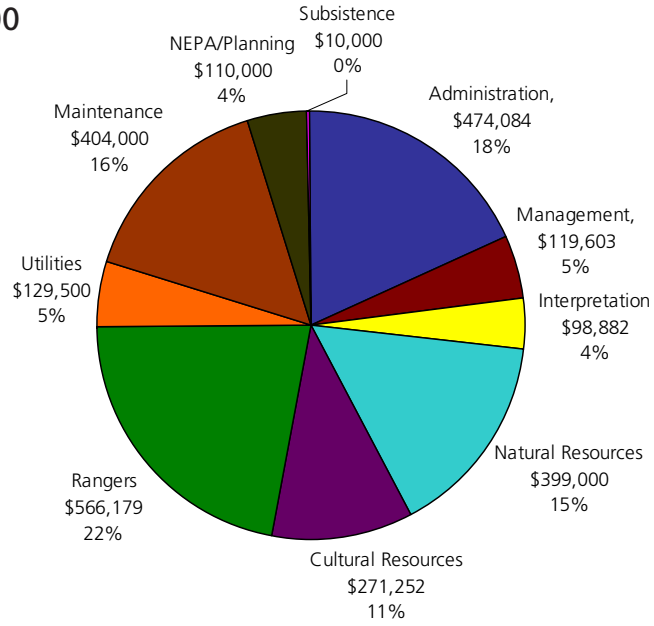
**Management & Administration: $593,687**
We installed a new server with 10 terabytes of storage space. We added many new electrical and data circuits in our Fairbanks Office. We are growing at a rapid pace and this investment in our infrastructure will allow flexibility as we meet the needs of the parks. We are continuing to look for ways to improve efficiencies and provide more helpful service to this organization.



Work would grind to a halt without the support of our Administrative Team. Here, IT Specialist Paul Atkinson sets up a new computer in the Fairbanks Administrative Center, base for resource staff and park managers.

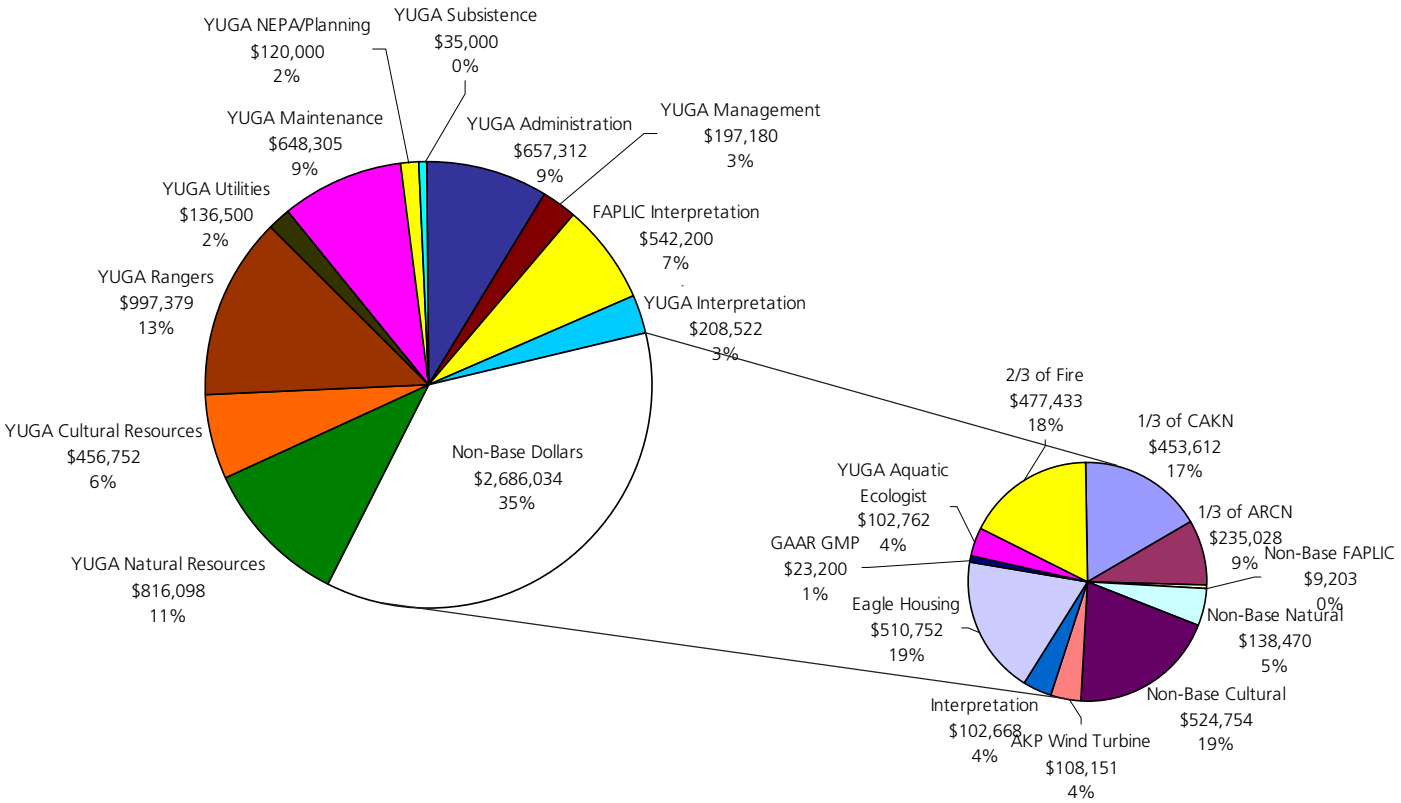
## Gates of the Arctic Operating Budget Base Allocations (ONPS) Expenditures

Total = $2,582,500.00

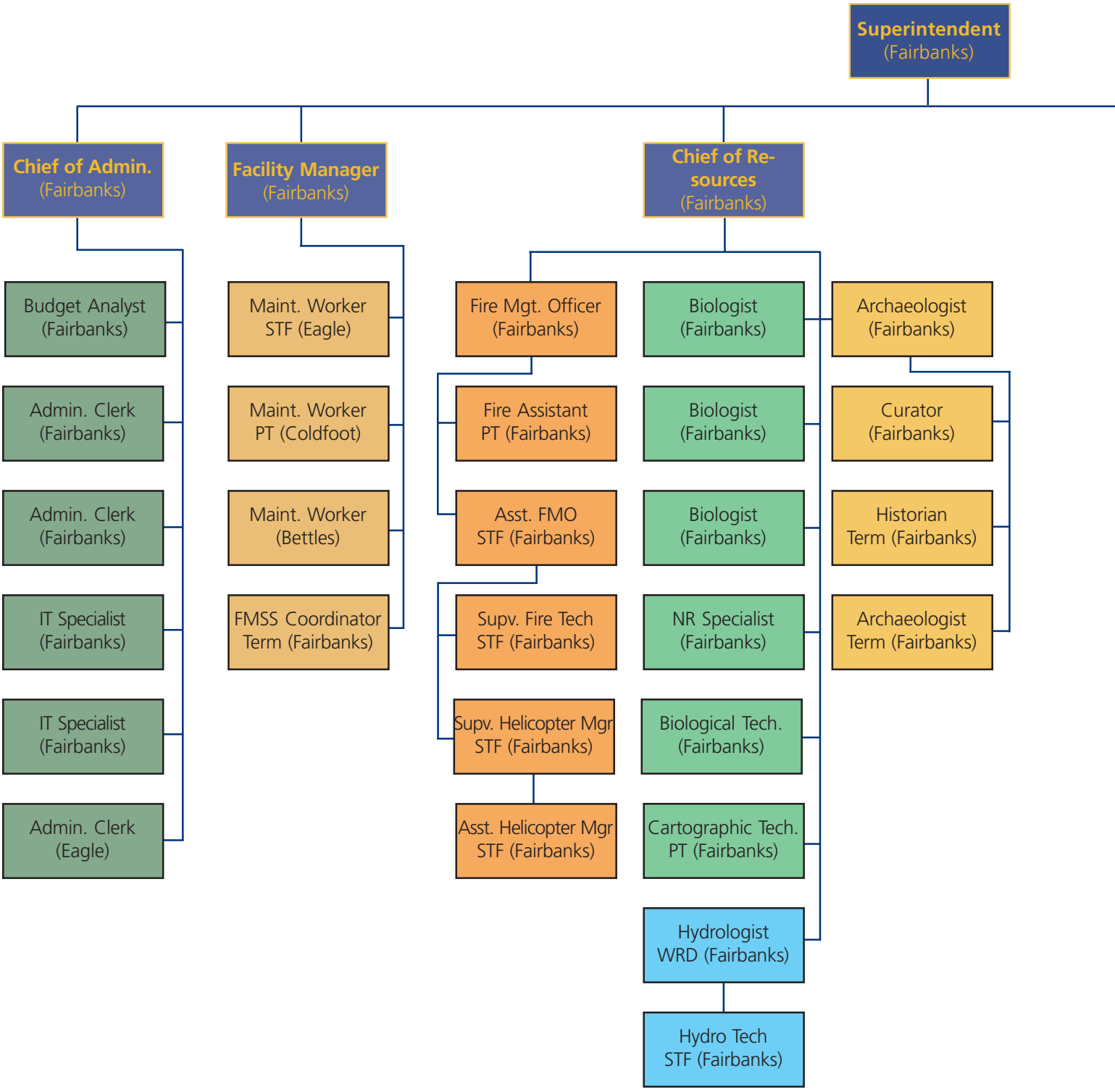


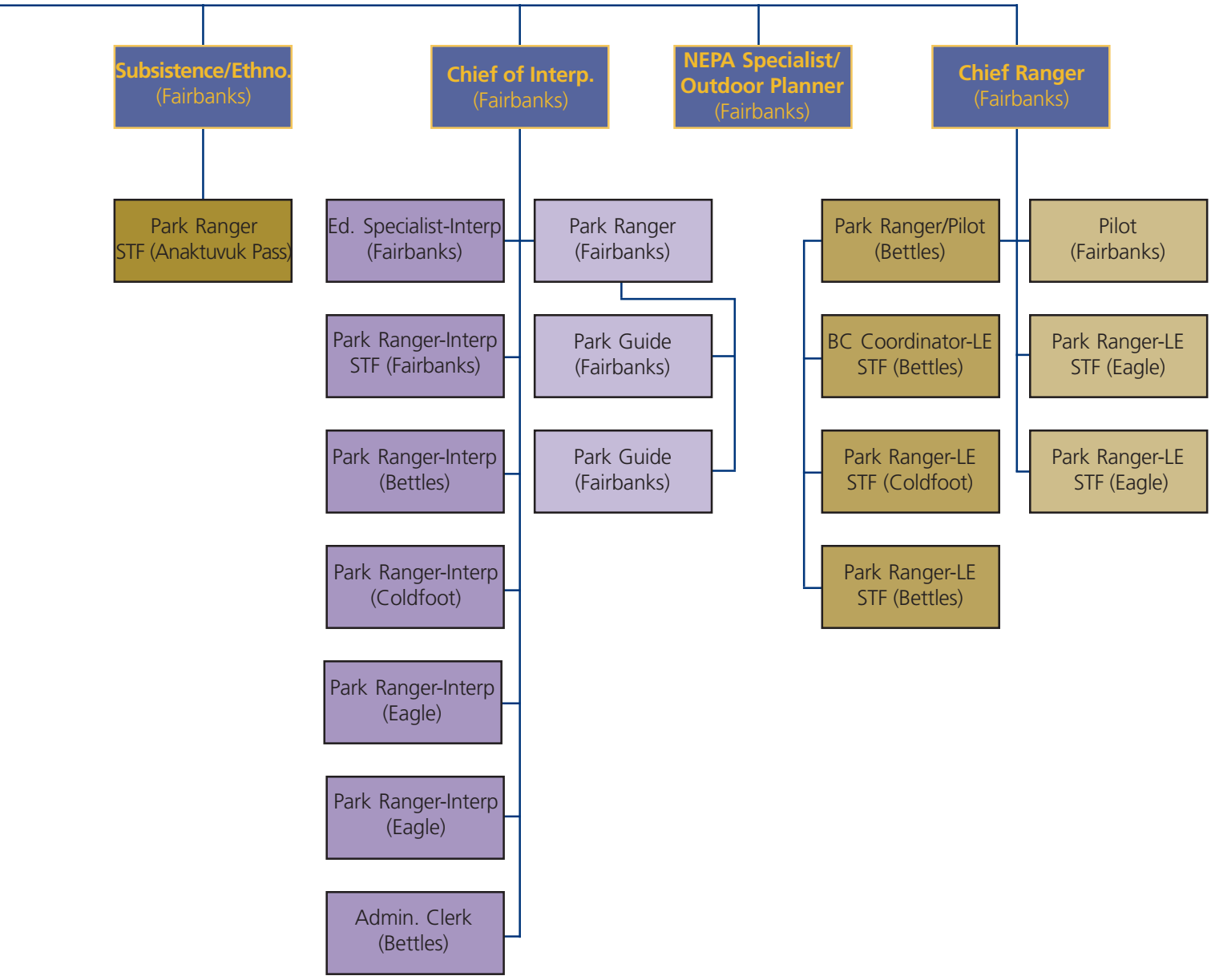

## YUGA All Funding Source Budget Allocations

Total = $5,896,068



# *Gates of the Arctic, Yukon-Charley Rivers, Alaska Public Lands Information Center Organization*




Subsistence/Ethno.
(Fairbanks)
Park Ranger
STF (Anaktuvuk Pass)
Chief of Interp.
(Fairbanks)
Ed. Specialist-Interp
(Fairbanks)
Park Ranger
(Fairbanks)
Park Ranger-Interp
STF (Fairbanks)
Park Guide
(Fairbanks)
Park Ranger-Interp
(Bettles)
Park Guide
(Fairbanks)
Park Ranger-Interp
(Coldfoot)
Park Ranger-Interp
(Eagle)
Park Ranger-Interp
(Eagle)
Admin. Clerk
(Bettles)
NEPA Specialist/
Outdoor Planner
(Fairbanks)
Chief Ranger
(Fairbanks)
Park Ranger/Pilot
(Bettles)
Pilot
(Fairbanks)
BC Coordinator-LE
STF (Bettles)
Park Ranger-LE
STF (Eagle)
Park Ranger-LE
STF (Coldfoot)
Park Ranger-LE
STF (Eagle)
Park Ranger-LE
STF (Bettles)

Prickly Rose (*Rosa acicularis*) buds. This prickly shrub is common throughout the forested areas of Gates of the Arctic National Park and Preserve.

*The National Park Service cares for special places saved by the American people so that all may experience our heritage.*

*EXPERIENCE YOUR AMERICA*

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